

ATTENUATED EMBEDDED PHASE SHIFT PHOTOMASK BLANKS

ABSTRACT

An attenuating embedded phase shift photomask blank that produces a phase shift of the transmitted light is formed with an optically translucent film made of metal, silicon, nitrogen and oxygen. An etch stop layer is added to improve the etch selectivity of the phase shifting layer. A wide range of optical transmission (0.001 % up to 15 % at 157 nm) is obtained by this process.